REMARKS

Claim 1 has been amended to further specify the hair treatment in accordance with the requirements of claims 14 and 15. New claim 16 further specifies the identity of the xanthine component. See, for example, the first paragraph at page 4. New claim 17 specifies the ratio of i) to ii) as being 3:1 to 1:3. See the specification at page 6, lines 1 to 3. New Claim 18 specifies the total amount of the xanthine ii) and α-hydroxy acid present in the leave on hair treatment composition as being from 2 to 5 wt.%. See the specification at 5, lines 26 to 29. New Claim 19 is an independent claim similar to the prior version of claim 1, except that component i) is an α-hydroxy acid component comprising L-tartaric acid and/or its salt, component ii) is a xanthine component comprising a substituted xanthine as described in claim 2, and the relative and total amounts of components i) and ii) are as described in new claims 17 and 18. Claims 13 to 15 are cancelled without prejudice.

It is respectfully submitted that the subject amendments overcome the 35 USC section 101 and 112 rejections.

In view of the amendments set forth above and the remarks that follow, reconsideration and allowance of the claims is respectfully requested.

Claims 11-5 and 7-12 stand rejected under 35 U.S.C. 103(a) as unpatentable over Barton et al. (WO 96/10387). Additionally, claims 1 and 6 stand rejected under 35 U.S.C. 103(a) as unpatentable over Barton et al. In view of Jeanjean (FR 2,751,541). These rejections are respectfully traversed.

The subject invention is directed to a method of treating hair, more particularly a method of "increasing" the length of the hair, decreasing the volume of the hair and/or increasing the high humidity style retention of the hair, through the application of a leave-on hair treatment product that comprises i) a xanthine and/or substituted xanthine (component (i) being hereinafter referred to the xanthine component) and ii) a selected α-hydroxy acid component, the xanthine and α-hydroxy acid components being are present in a selected ratio, i.e., a ratio of 1:0.01 to 0.01:1 as described in claim 1 and a ratio of from 3:1 to 1:3 as described in claims 17 and 19. As demonstrated by Examples 1 and 2, the application of hair treatment compositions comprising the subject combination of xanthine and α-hydroxy acid components (caffeine and L-tartaric acid, in a weight ratio of caffeine to L-tartaric acid of 1:3) to naturally curly hair switches followed by combing and drying of the combed switches results in hair that better retains its combed straightness upon drying. The hair treated hair is "longer" by virtue of the hair exhibiting less curliness.

The Applicants have also found that the application of the subject hair treatment compositions provides a means of reducing volume (e.g., controlling frizzing) and increasing high humidity style retention. Examples 3 and 4 show the high humidity style retention benefits of the combination of xanthine and α-hydroxy acid components, the exemplified xanthine component being caffeine and the exemplified α-hydroxy acid component being citric acid. Depending on its level, caffeine alone provided style retention on a par with or slightly less effective than that of a commercial hairspray, whereas, the combination of citric acid and caffeine provided significantly better style retention than was obtained with either component alone. Compare the Curl Drop Out Values for 1% caffeine and 1% citric acid (45.8% and 49%, respectively) with a Curl Drop Out Value of 35% for the combination of caffeine + citric acid (1% of each).

Barton et al. is directed to a hair stimulant composition as well as to a method of modifying hair growth and/or hair loss using the hair stimulant compositions therein described. There is nothing in the citation that discloses or suggests methods of lengthening hair by reducing its curliness, or methods of reducing hair volume or increasing high humidity style retention. Disclosed as hair stimulants are one or more of the following: 1) water-soluble potassium, copper and/or zinc salts, 2) flavone or flavone derivatives, 3) a xanthine such as theophylline or a derivative thereof such as methyl silanol theophyllin acetate alginate, 4) a mucopolysaccharie or derivative thereof, 5) a fat soluble vitamin or a derivative thereof such as vitamine A palmitate or vitamen E, 6) Zedoary, ginger, and/or cinnamon oil, and 7) an allyl-based plant extract such as onion or garlic extract. In the exemplified compositions, the hair stimulant is a complex of several of these components, with the Example 2 shampoo and Example 3 "leave-on" conditioner each containing 20% of the concentrated hair stimulant complex. None of the exemplified compositions contains an α-hydroxy acid component as required by the subject claims. To the extent that there is any disclosure of such a component it is as part of a buffer system that lists both α-hydroxy acid and non-α-hydroxy acid components. See page 5, lines 23 to 27:

> The composition may be buffered by means well known in the art, for example by the use of buffer systems comprising succinic acid, citric acid, lactic acid, phosphoric acid, mono- or disodium phosphoric and sodium carbonate.

Moreover, there is nothing in Barton et al. that discloses or suggests the ratio of α-hydroxy carboxylic acid to xanthine component required by the subject claims. In short, Barton et al. is concerned with growing hair or preventing hair loss. There is nothing that discloses or suggests the selection, from its list of numerous hair

stimulants, of a xanthine component together with an α-hydroxy acid to formulate styling compositions to treat hair to provide the styling benefits herein described.

Jeanjean, directed to the treatment of alopecia through the topical application of a dermo-cosmetic composition comprising a synergistic association of caffeine and one or more alkaloids selected from quinine, quinidine, cinchonine, cinchonidine, and their salts, fails to remedy the deficiencies of Barton et al.[1] Like Barton et al., there is nothing in Jeanjean that discloses or suggests the combination of xanthine and α-hydroxy acid components to provide the unexpected improvement in styling benefits herein described.

In light of the above amendments and remarks, it is respectfully requested that the application be allowed to issue.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,

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[1] Several of the exemplified compositions i.e., shampoos and post-shampoo crème, disclose adjusting pH to a desired value with citric acid, however, the amount of citric acid added is not disclosed, nor is there any disclosure of the relative amounts of caffeine and citric acid.